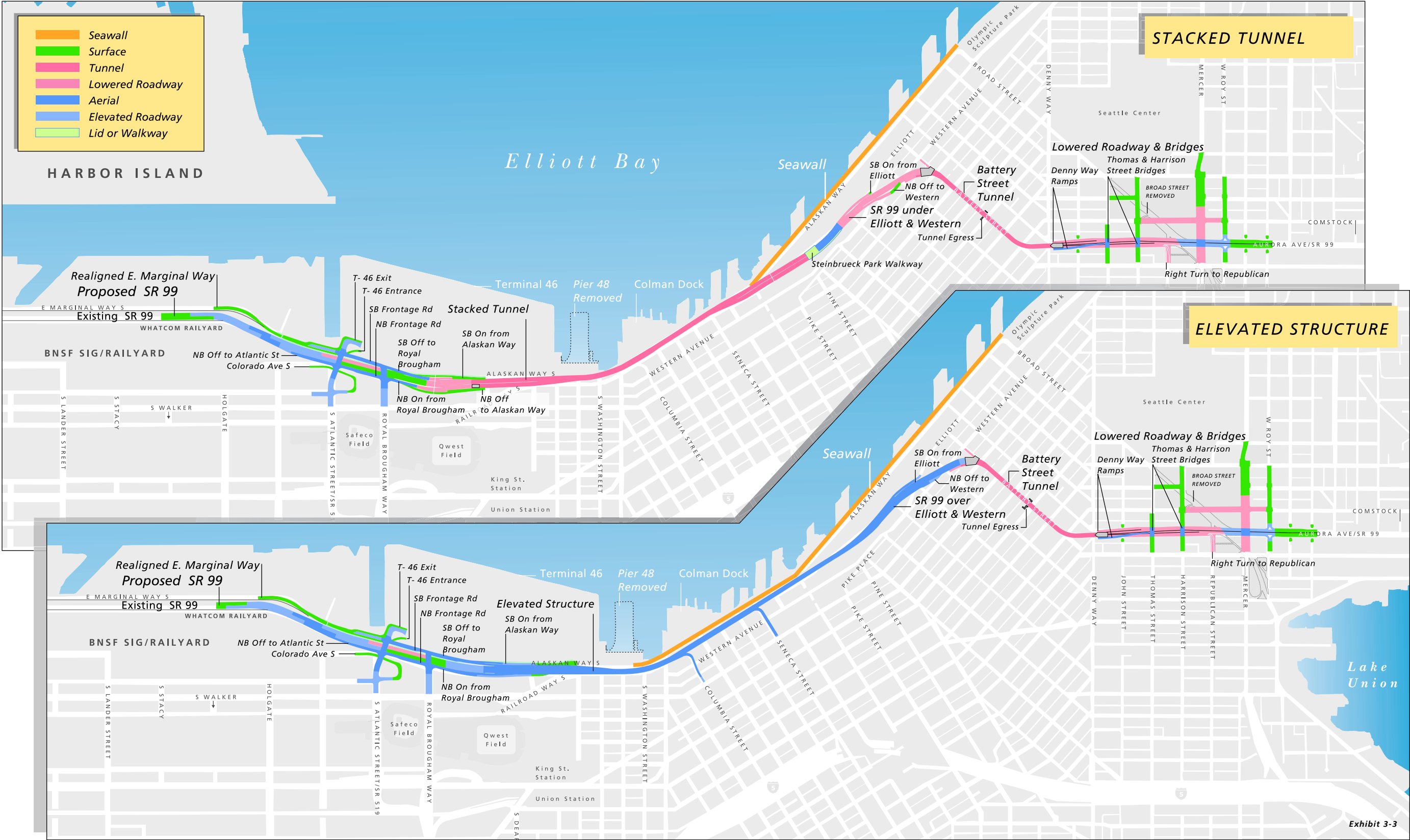


The Alternatives



CHAPTER 3 - SUMMARY

What’s in Chapter 3?

Chapter 3 summarizes information contained in Chapters 4, 5, 6, 7, and 8 of the Supplemental Draft EIS for the Alaskan Way Viaduct and Seawall Replacement (AWV) Project. Specifically, this chapter summarizes the alternatives evaluated, permanent project effects and possible mitigation, temporary construction effects and possible mitigation, and cumulative effects.

1 What alternatives are evaluated in the Supplemental Draft EIS?

The Tunnel and Elevated Structure Alternatives are evaluated in this Supplemental Draft Environmental Impact Statement (EIS). Exhibit 3-1 shows the components that compose these two alternatives. The top line of Exhibit 3-1 indicates the preferred components for each alternative. The bottom line shows other design choices that can be made.

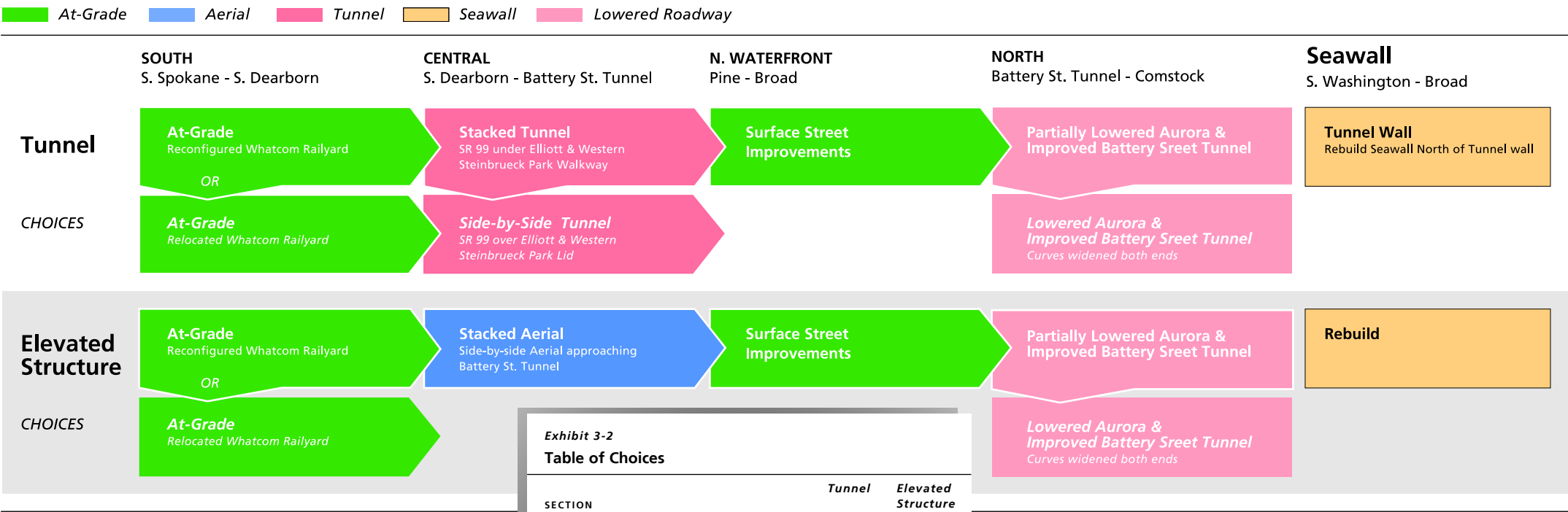
Both alternatives have the same choices in the south and north end, and the Tunnel Alternative has a number of choices that are possible in the central section. In the central section, the choices to build the Steinbrueck Park Lid, Steinbrueck Park Walkway, and SR 99 under Elliott and Western only apply to the Tunnel Alternative.

There are multiple ways the project components can be strung together to create a viable Tunnel or Elevated Structure Alternative. Exhibit 3-2 shows what choices could be made for each alternative.

2 How would the Tunnel Alternative replace SR 99 and the viaduct?

The Tunnel Alternative would replace SR 99 and the Alaskan Way surface street with the components

Alternatives Evaluated in the Supplemental Draft EIS



described below and shown in Exhibit 3-3. Other design choices for the Tunnel Alternative and their effects are discussed in this chapter in Questions 19 and 20, respectively.

South Section

Reconfigured Whatcom Railyard – Replaces the existing viaduct with a six-lane roadway that would begin at-grade, transition to an elevated structure that bridges over the railroad tracks, and return to ground level where a new aerial interchange would be built over SR 99 near the stadiums at S. Atlantic Street and S. Royal Brougham Way.

Exhibit 3-2 Table of Choices		
SECTION	Tunnel	Elevated Structure
SOUTH		
Reconfigured Whatcom Railyard	Yes	Yes
Relocated Whatcom Railyard	Yes	Yes
CENTRAL		
Stacked Tunnel	Yes	No
Side-by-Side Tunnel	Yes	No
Elevated Structure	No	Yes
Steinbrueck Park Walkway	Yes	No
Steinbrueck Park Lid	Yes	No
SR 99 Under Elliott & Western	Yes	No
SR 99 Over Elliott & Western	Yes	Yes
NORTH		
Battery Street Tunnel Improvements and Partially Lowered Aurora	Yes	Yes
Battery Street Tunnel Improvements with Curves Widened and Lowered Aurora	Yes	Yes

Exhibit 3-1

Central Section

Stacked Tunnel – Replaces the existing viaduct with a stacked, six-lane tunnel (three lanes in each direction) from approximately S. Dearborn Street to Pine Street.

Steinbrueck Park Walkway – Builds a walkway and a partial lid over a portion of the roadway that connects from Pine Street up to the Battery Street Tunnel, creating a pedestrian connection between Steinbrueck Park and the waterfront.

SR 99 Under Elliott and Western Avenues – Replaces SR 99 between Pine Street and Virginia Street with an aerial structure. From Virginia Street, SR 99 would connect to the Battery Street Tunnel by traveling under Elliott and Western Avenues.

Alaskan Way Surface Street – Replaces the Alaskan Way surface street east of the existing roadway with two lanes in each direction and two waterfront streetcar tracks running in the center travel lanes as shown in Exhibit 3-4. The center lane would have alternating turn pockets and streetcar stops. Between Railroad Way S. and Yesler Way, Alaskan Way would have three lanes in each direction.

North Waterfront Section

Alaskan Way Surface Street – Replaces Alaskan Way with two lanes in each direction. The waterfront streetcar would be contained within the center traffic lane in both directions. The center lane would have alternating turn pockets and streetcar stops between Pine and Broad Streets.

North Section

Battery Street Tunnel Improvements and Partially Lowered Aurora – Improves the Battery Street Tunnel by lowering the tunnel floor to increase the vertical clearance to 16.5 feet and updates the tunnel’s safety systems for fire, ventilation, and emergency exits. The Battery Street Tunnel would also be improved to meet current standards for earthquake resistance.

The Partially Lowered Aurora improvements would lower SR 99 from the Battery Street Tunnel to about Republican Street. North of Republican Street, SR 99 would be improved and widened up to Aloha Street. Access on to SR 99 would be provided at Denny Way and Roy Street, and access off SR 99 would be provided at Denny Way, Republican Street, and Roy Street.

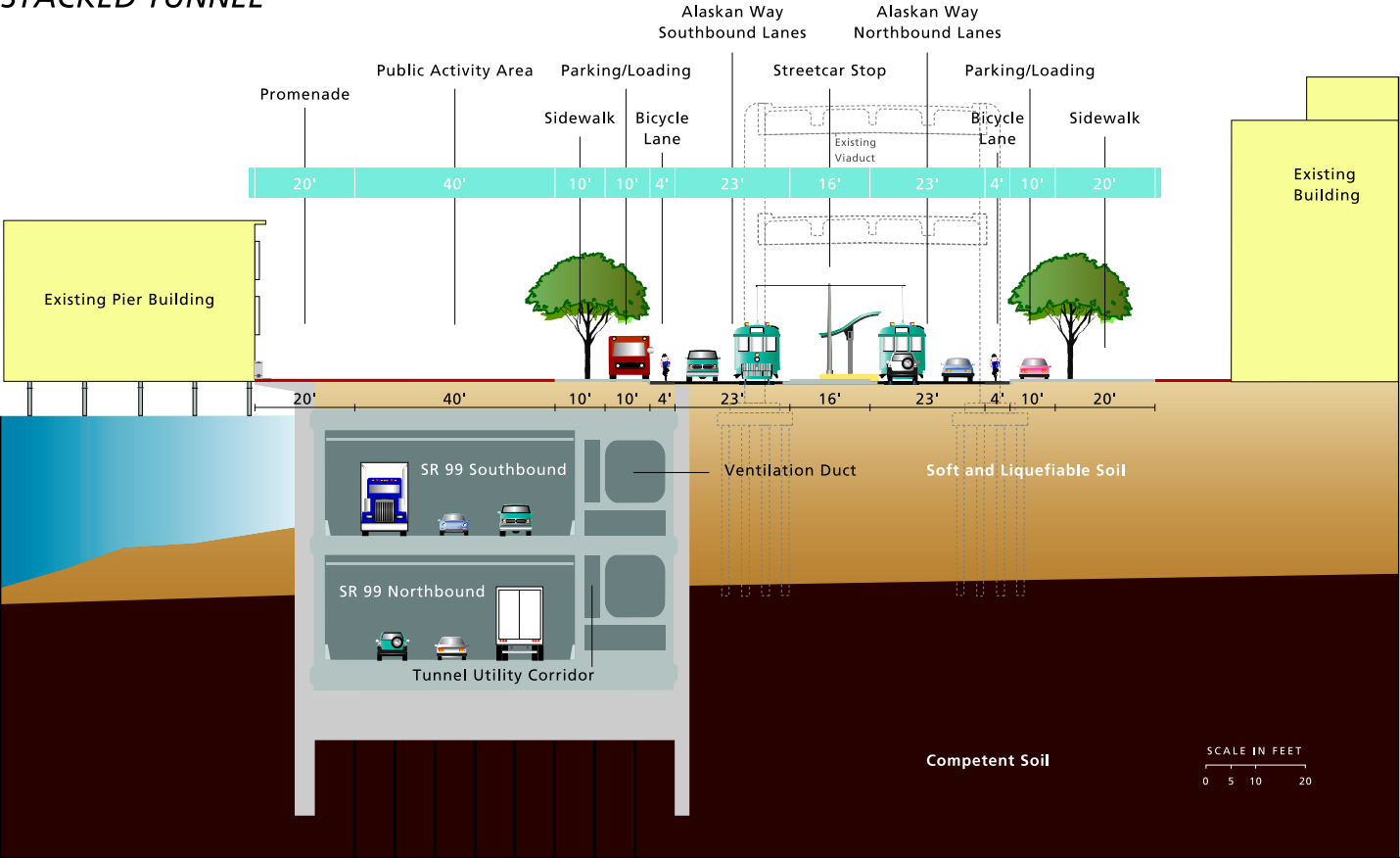
Are tunnels safe?

Structural engineers agree that tunnels are one of the safest places to be during an earthquake because they move with the earth. Five of Seattle’s major tunnels remained structurally sound and were not damaged during the 2001 Nisqually earthquake. These tunnels include the Battery Street Tunnel, the Third Avenue bus tunnel, the rail tunnel under Seattle that is more than 100 years old, and the two I-90 tunnels (Mt. Baker and Mercer Island tunnels). In the 1989 San Francisco earthquake, the Bay Area Rapid Transit (BART) tunnel withstood earthquake forces and resumed service within hours during the time when many area bridges were shut down and undergoing extensive repairs.

The proposed tunnel would be equipped with well-marked exits and advanced equipment and tunnel safety systems for fire suppression, ventilation, and lighting. It would also be designed to be safe in the case of a tsunami.

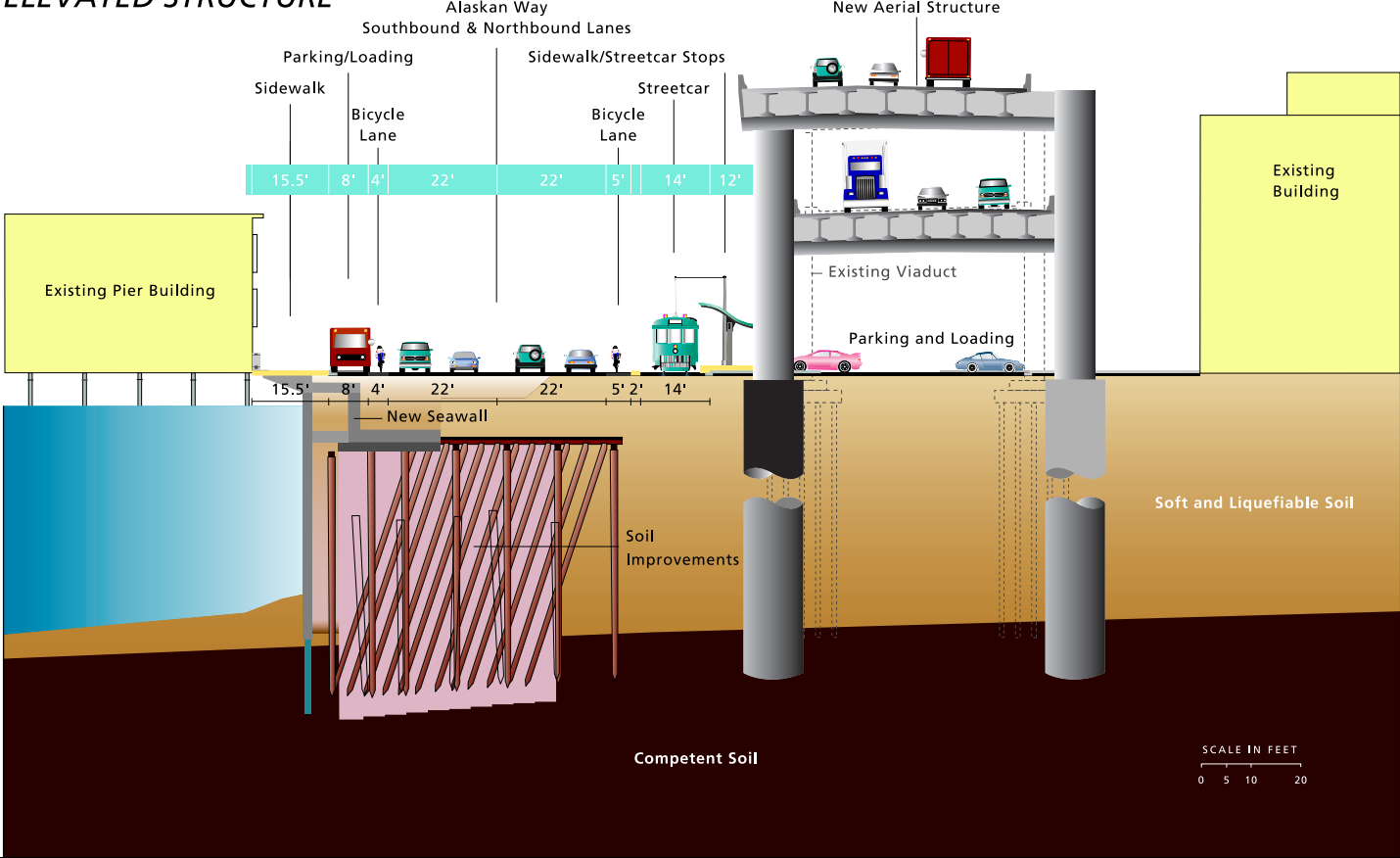
Alaskan Way Cross-Sections

STACKED TUNNEL



Conceptual Cross-Section at Seneca Street Looking North

ELEVATED STRUCTURE



Conceptual Cross-Section at University Street Looking North

Two new bridges would be built at Thomas and Harrison Streets. Broad Street would be closed between Fifth Avenue N. and Ninth Avenue N., allowing the street grid to be connected. Mercer Street would continue to cross under SR 99 as it does today, but it would be widened and converted into a two-way street with three lanes in each direction and a center turn lane.

3 **How would the Elevated Structure Alternative replace SR 99 and the viaduct?**

The Elevated Structure Alternative includes replacing SR 99 and the Alaskan Way surface street with the components described below and shown in Exhibits 3-3 and 3-4. Other design choices for the Elevated Structure Alternative and their effects are discussed in this chapter in Questions 19 and 20, respectively. The main difference between the Tunnel and Elevated Structure Alternatives occurs in the central section where SR 99 is either proposed to be underground in a tunnel or a stacked elevated structure along the waterfront.

South Section

Reconfigured Whatcom Railyard – This is the same as the choice described in Question 2 for the Tunnel Alternative.

Central Section

Elevated Structure – Replaces the existing viaduct with a stacked aerial structure along the central waterfront. For the most part, the new aerial structure would have three lanes in each direction, and it would have wider lanes and shoulders than the existing viaduct. Between S. King Street and the ramps at Columbia and Seneca Streets, SR 99 would have four lanes in each direction. The existing ramps at Columbia and Seneca Streets would be rebuilt. The new elevated structure would be 11.5 to 35 feet wider than the existing viaduct from south of S. Main Street up to Union Street. Near S. King Street to south of S. Main Street, the new elevated structure would be 54 to 74 feet wider than the existing viaduct as SR 99 transitions from a side-by-side at-grade roadway in the

south to a new double-level elevated structure. The new structure would also be about 3 feet taller than the existing structure.

SR 99 Over Elliott and Western Avenues – Rebuilds SR 99 as an aerial structure over Elliott and Western Avenues between Pine Street and the Battery Street Tunnel. The existing ramps would be rebuilt similar to the existing facility.

Alaskan Way Surface Street – Replaces the Alaskan Way surface street in approximately the same location as it is today with two lanes in each direction. Between S. King Street and Yesler Way, left-turn pockets may be provided. A single waterfront streetcar track would be rebuilt on the east side of Alaskan Way, and a passing track would be provided on the east side of Alaskan Way between Union and Pike Streets.

North Waterfront Section

Alaskan Way Surface Street – Replaces the Alaskan Way surface street with four lanes (two lanes in each direction). A single waterfront streetcar track would be rebuilt on the east side of Alaskan Way.

North Section

Battery Street Tunnel Improvements and Partially Lowered Aurora – This is the same as the choice described in Question 2 for the Tunnel Alternative.

4 **How would the seawall be replaced?**

The seawall would be replaced from S. Jackson Street to just north of Broad Street. Both alternatives would strengthen soil behind the existing seawall with cement grout and would replace face paneling where the failing bulkhead is located between S. Jackson Street and S. Washington Street.

For the Tunnel Alternative, the existing seawall would be replaced with the outer wall of the tunnel from S. Washington Street up to Union Street. For most of the areas between Union and Broad Streets where a tunnel is not proposed, the seawall would be replaced by strengthening the soil and replacing the existing

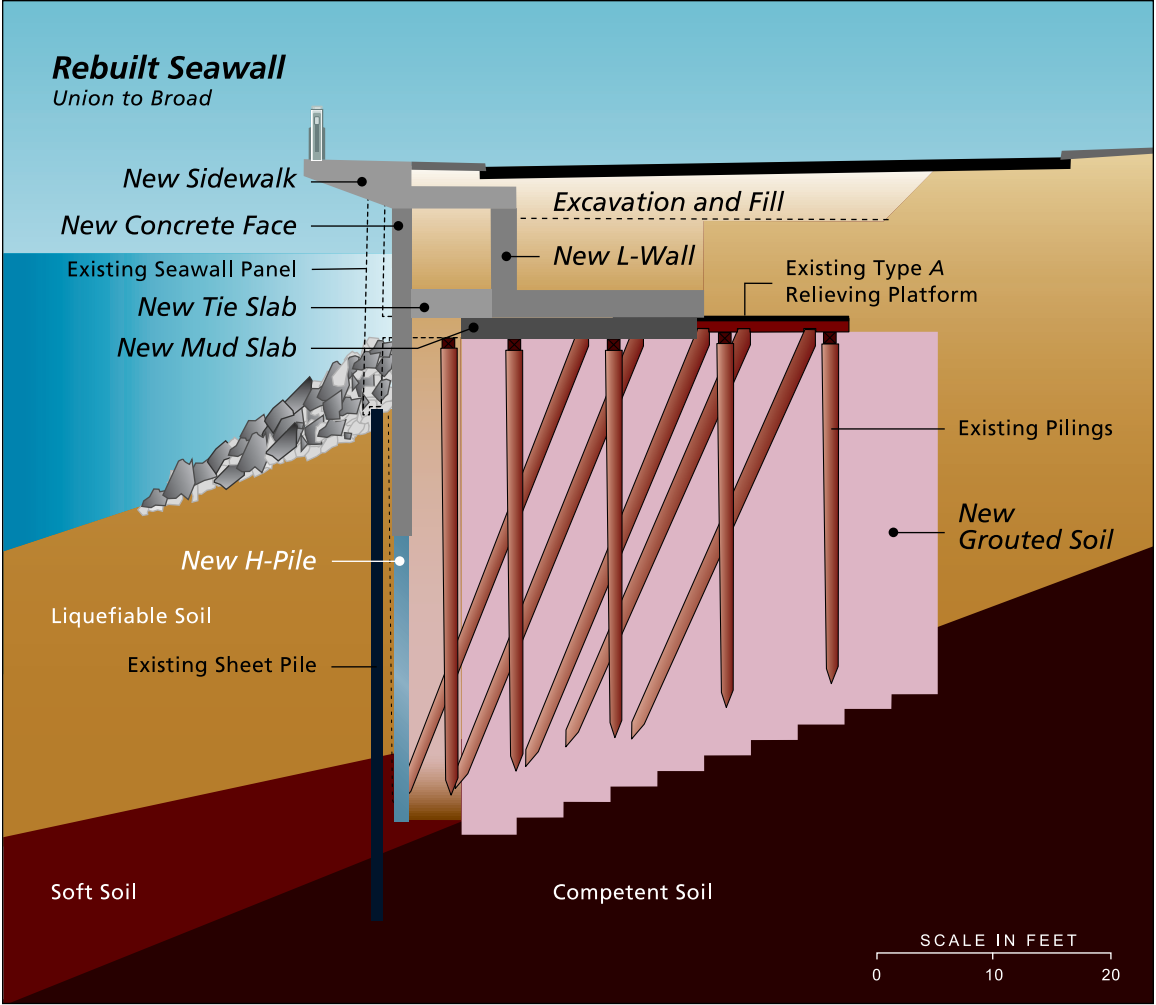


Exhibit 3-5

seawall with a new face panel and L-wall support structure, as shown in Exhibit 3-5. Near Pier 66, between Blanchard and Battery Streets, the soil would be strengthened and no other improvements would be made since this section of the seawall has already been improved.

The Elevated Structure Alternative proposes to replace the seawall from S. Washington Street to just north of Broad Street using the same seawall design proposed north of Union Street for the Tunnel Alternative, as shown in Exhibit 3-5.

5 **How much would it cost to build the project?**

Costs for the alternatives are shown on the next page in Exhibit 3-6. These costs were developed for the alternative configurations described in Questions 2

2006 Appendix B

In the *2006 Appendix B, Alternatives Description and Construction Methods Technical Memorandum, Chapter 2* describes the alternatives and design choices in more detail.

and 3 of this chapter and they do not include costs for the other design choices discussed in Questions 19 and 20. These costs were updated in 2005 and are shown as a range, which represents a 10 to 90 percent probability for total project costs. This means that for the Tunnel Alternative, there is a 10 percent chance that the project would be built for \$3.6 billion or less and a 90 percent chance that it could be built for \$4.3 billion or less.

Exhibit 3-6
Project Cost Ranges

Alternative	Cost Range in billions
Tunnel Alternative	\$3.6 — 4.3
Elevated Structure Alternative	\$2.5 — 2.9

These costs were developed through a process called the Cost Estimate Validation Process (CEVP®). Costs developed through the CEVP include adjustments for project risks and inflation to the year the dollars would be spent during construction. The process examines how risks can be lowered and cost vulnerabilities can be managed or reduced from the very beginning of the project.

At this time, \$2.45 billion has been allocated to build the project. The project partners are pursuing additional funds from other sources. Two sources of anticipated funds include up to \$700 million. Up to \$500 million may be provided from the City of Seattle and up to \$200 million may be provided by the Port of Seattle. If these funds are provided, a total of \$3.15 billion could be available. Funding from other sources may provide additional funds and continue to be pursued.

The project partners have considered ways to phase project construction based on different funding scenarios. If all of the funds to build the project are not available at the beginning of the project, then we would use available funds to replace the most vulnerable parts of the viaduct and seawall first and then fund future phases of work once funds became available. If funding is constrained, we could focus on building the core components, which may include the elements identified in Exhibit 3-7.

Exhibit 3-7

Core Elements of the Tunnel and Elevated Structure Alternatives

Tunnel Project	Elevated Structure Project
South Section Improvements	South Section Improvements
Stacked Tunnel up to Pike Street (includes seawall)	Elevated Structure and new seawall up to Pike Street
SR 99 over Elliott & Western – from Pike street to the Battery Street Tunnel	SR 99 over Elliott & Western – from Pike street to the Battery Street Tunnel
Lid over Victor Steinbrueck Park	
Fire and Safety Improvements to the Battery Street Tunnel	Fire and Safety Improvements to the Battery Street Tunnel
Cost Range = \$3.0 – \$3.6 billion	Cost Range = \$2.0 – \$2.4 billion

The Core Tunnel and Elevated Structure Projects do not include improvements proposed to the seawall north of Pike Street or the improvements proposed north of the Battery Street Tunnel. These items would be built in future project phases once funding could be secured.

6 What are the permanent transportation effects of the alternatives?

The following two questions describe permanent effects caused by both of the alternatives. Mitigation for permanent effects is discussed in Question 8. Temporary effects during construction are discussed in Questions 11 through 15 and Question 17. Possible mitigation measures during construction are discussed in Questions 16 and 18.

Traffic would operate similarly throughout the corridor for the Tunnel and Elevated Structure Alternatives. The primary difference is that with the Tunnel Alternative, drivers would enter and exit downtown via ramps to Alaskan Way near S. King Street. With the Elevated Structure Alternative, drivers would enter and exit downtown as they do today via ramps at Columbia and Seneca Streets. The ramp configurations for both alternatives would provide similar opportunities for drivers to enter and exit downtown via SR 99. The only difference is that traffic would be able to more evenly distribute along the downtown street grid with the Tunnel Alternative, which would cause less congestion at the intersection of First Avenue and Columbia Street.

In the north section, the Partially Lowered Aurora improvements would alter traffic patterns and access points compared to alternatives studied in the Draft EIS. Partially Lowered Aurora would improve traffic flow and safety on SR 99 by allowing vehicles to enter and exit SR 99 only at specific locations. They would also connect city streets over SR 99, which would improve conditions for drivers heading east or west.

Northbound PM peak travel speeds north of the Battery Street Tunnel would improve for both the Tunnel and Elevated Structure Alternatives. PM peak hour speeds are shown in Exhibit 3-8.

Exhibit 3-8

SR 99 Peak Hour Speeds
Shown as miles per hour (mph)

	2002 Existing Facility	2030 Existing Facility	2030 Tunnel	2030 Elevated Structure
SOUTHBOUND				
North of Battery St. Tunnel	40	35	35	35
Battery St. Tunnel	34	29	29	29
NORTHBOUND				
North of Battery St. Tunnel	33	28	40	40
Battery St. Tunnel	33	25	30	30

7 What are the other permanent effects of the alternatives?

What are the permanent effects to noise?

Both alternatives would not change noise levels much in the south section of the project corridor. In the central section, the Tunnel Alternative would dramatically decrease noise levels by about 12 A-weighted decibels (dBA) along the waterfront. This would sound like cutting the noise level by more than half. Noise along the central section of the project corridor is currently loud and would not change much if the Elevated Structure Alternative is built. Exhibit 3-9 shows the noise levels modeled for the alternatives in the year 2030.

North of the Battery Street Tunnel, noise levels for both alternatives are expected to be within 2 dBA of the existing conditions in most locations. One location along SR 99 near Thomas Street is modeled to experience about a 7-dBA decrease compared to the

What is the CEVP®?

Construction project costs and construction durations were determined using the Cost Estimate Validation Process (CEVP®). The CEVP is an intense workshop in which a team of engineers and risk managers with expertise on large projects both locally and nationally examine a transportation project and review project details with engineers from the Federal Highway Administration (FHWA), Washington State Department of Transportation (WSDOT), and the City of Seattle.

The CEVP workshop team uses systematic project review and risk assessment methods to identify and describe cost and schedule risks and evaluate the quality of the information at hand. The process examines how risks can be lowered and cost vulnerabilities can be managed or reduced from the very beginning of a project. A benefit of CEVP is that it identifies risks early in the project development process. This allows the team to work on ways to reduce risks that would add cost or extend the time needed to construct the project.

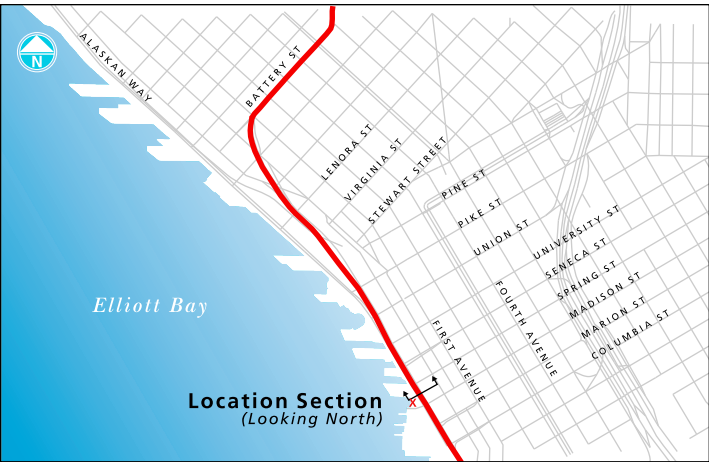
How often does WSDOT review a project using the CEVP®?

WSDOT updates project costs and construction durations for the AWW Project when there are changes to the overall design, construction approach, or other factors that might affect the total project costs or construction duration, such as escalating costs for construction materials such as steel or concrete. WSDOT updated project costs and construction durations for the AWW Project in 2005, and the project will be reviewed again in late 2006.

What is the 2030 Existing Facility?

We know it is highly unlikely that the viaduct would last until 2030. However, we study what traffic would be like if the existing facility were still around in 2030 because it provides a baseline that can be compared with traffic conditions for the proposed alternatives.

The 2030 Existing Facility takes into account future population growth and other funded transportation projects such as Link light rail.



These graphs are showing how loud traffic would be at various distances from Alaskan Way. If you were standing where the X is, the noise level would be about 72 dBA. This is similar to the noise you would hear standing 3 feet from a blender.

existing condition because the lowered roadway would be a little farther away than it is today and the retaining walls would shield some of the traffic noise from the property.

What are the permanent effects along the waterfront?

The part of Seattle’s waterfront stretching from Pioneer Square to the Battery Street Tunnel will be different depending on which alternative is chosen, as shown in Exhibits 3-10 and 3-11 on the following pages. For the Tunnel Alternative, removing the existing viaduct would transform the waterfront, opening up scenic views of the city skyline, Elliott Bay, and the Olympic Mountains, and expanding public open space along the waterfront. The proposed Tunnel Alternative would also include a 20-foot-wide walkway that would cross over SR 99, connecting Steinbrueck Park to the section of Alaskan Way near the Seattle Aquarium and Pier 62/63.

The Elevated Structure Alternative would replace the existing viaduct with a new structure that would be 11.5 to 35 feet wider than the existing viaduct from south of S. Main Street up to Union Street. Near S. King Street to south of S. Main Street, the new elevated structure would be 54 to 74 feet wider than the

Noise Levels for Each Alternative

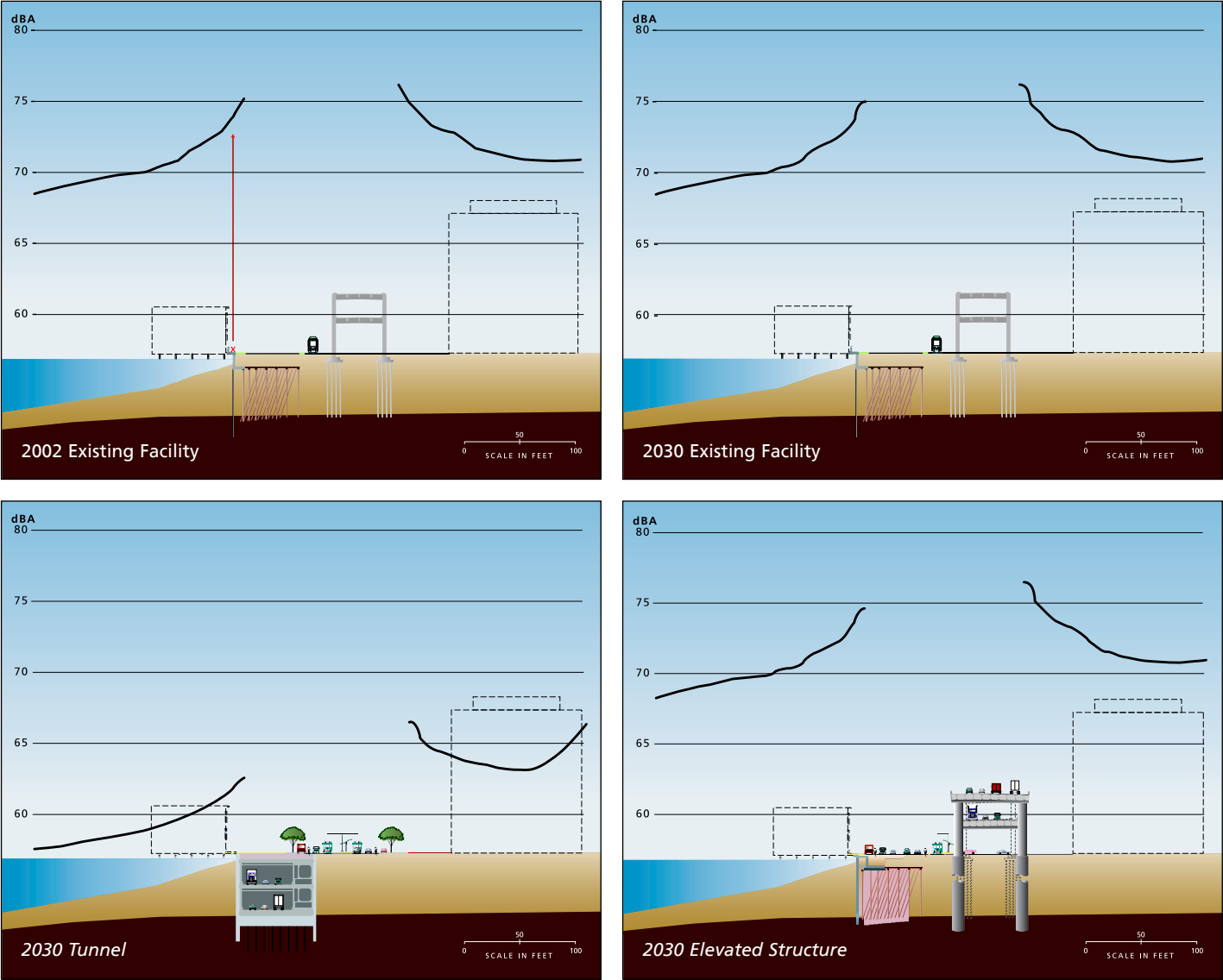


Exhibit 3-9

existing viaduct. Additionally, the elevated structure would be about 3 feet taller than the existing viaduct.

The new elevated structure would continue to provide views of the city skyline, Elliott Bay, and the Olympic Mountains for many drivers. But views toward the waterfront would be different than today, because roadside barriers would be solid (like concrete Jersey barriers) instead of being topped by railings, and the barriers would be taller than they are now.

Like the existing structure, the new structure would continue to obstruct views; cast shade over an exten-

sive area; limit future development of parks, trails, and sidewalks; generate overhead traffic noise; and give the impression that the city is separated from its waterfront. However, the Elevated Structure Alternative would make some improvements over existing conditions. The new structure would have fewer support columns and they would be spaced farther apart, reducing visual clutter beneath the structure. The streetscape—things like sidewalks, streetcar stops, landscaping, and lighting—would be part of an integrated design that would create continuity along the waterfront compared to today’s conditions. Project

What is a dBA?

Sound levels are expressed on a logarithmic scale in units called decibels (dB). A-weighted decibels (dBA) are the commonly used frequency that measures sound at levels that people can hear.

To the human ear, a 1- to 3-dBA change is hard to distinguish, but a 5 dBA change in noise level is readily noticeable. A 10 dBA decrease would sound like the noise level has been cut in half.



Visual Simulations Looking Southeast from Yesler Way

Exhibit 3-10

designers will also continue to look at ways to improve the design of the Elevated Structure Alternative to better fit in with its surroundings.

Both alternatives propose changes to amenities found along the Alaskan Way surface street. The biggest differences between the two alternatives would occur in the central waterfront area from about S. Washington Street to Union Street. In this area, the Tunnel Alternative would replace the existing 20-foot-wide sidewalk on the west side of Alaskan Way with a 70-foot-wide mixed-use area that would include a roadside sidewalk and a waterfront promenade, separated by a broad space for landscaping and public activities. For the Elevated Structure Alternative, the existing 20-foot-wide sidewalk on the west side of Alaskan Way between S. Washington and Union Streets would be narrowed to about 15 feet to accommodate the width of the new viaduct.

For the Tunnel Alternative, sidewalks on the east side of Alaskan Way between S. Washington Street and Union Street would be 20 feet wide. For the Elevated Structure Alternative, between Yesler Way and Union Street the sidewalk would be 12 feet wide, broadening to about 20 feet at crosswalks and some streetcar stops. However, the bases of the elevated structure’s support columns would be located partially within the sidewalk, effectively narrowing the sidewalk width next to the columns to about 8 feet.

Both alternatives would replace the existing waterfront streetcar tracks located along Alaskan Way. The Tunnel Alternative would replace the existing one-track system with a two-track system. The two streetcar tracks would be provided in the center of the Alaskan Way surface street, and vehicles would share a lane with the streetcar. A two-track streetcar system could provide better streetcar service along the waterfront than the existing system. With two tracks, the

streetcar could also become part of an expanded system that could stretch farther up the waterfront or could connect with neighborhoods to the east. With the Elevated Structure Alternative, the existing one-track streetcar system would be replaced with a similar system. The streetcar track would be located on the east side of Alaskan Way, with a passing track on the east side of the corridor, between Union and Pike Streets. This streetcar configuration would replace the existing system but most likely wouldn’t provide the same opportunities as the Tunnel Alternative for future expansion.

Near the south portal of the Battery Street Tunnel, the Tunnel Alternative would remove the existing aerial structure that carries SR 99 over Elliott and Western Avenues, replacing it with a roadway that would cross under those streets. This would eliminate effects from the existing overpass like shadows, view obstruction, and contrast between the overpass struc-





Visual Simulations Looking South from Union Street

Exhibit 3-11

ture and the surrounding Belltown neighborhood. The Elevated Structure Alternative would replace the existing overpass with a new elevated structure that would improve driving conditions on SR 99 but would maintain the effects of the existing structure on the neighborhood below.

How many properties would be affected?

Exhibit 3-12 shows how many properties would be affected for each alternative. The Tunnel Alternative requires 14 building acquisitions, and the Elevated Structure Alternative requires 13 building acquisitions. No residential units would be acquired.

Exhibit 3-12
Parcels Acquired for the Alternatives

	S E C T I O N			
	South	Central	North	TOTAL
Tunnel Alternative				
Number of Partial Acquisitions ¹	8	2	8	18
Number of Full Acquisitions ²	4	11	14	29
Total Properties Affected	12	13	22	47
Elevated Structure Alternative				
Number of Partial Acquisitions	8	3	8	19
Number of Full Acquisitions	4	10	14	28
Total Properties Affected	12	13	22	47

¹ A partial acquisition only requires a portion of the property to be obtained.

² A full acquisition requires the entire property to be obtained.

What are the permanent effects to historic resources?

For both alternatives, the South of Downtown (SODO) Ramps proposed in the south section would

permanently reduce access to the Bemis Building; however, the Washington-Oregon Shippers Cooperative Association (WOSCA) Freight House (801 First Avenue S.) would not be removed, as previously described in the Draft EIS.

In the central section, both alternatives would still require the Washington Street Boat Landing to be moved west, though it wouldn’t need to be moved as far to the west as described in the Draft EIS.

In the central section, the Tunnel Alternative would locate the SR 99 tunnel portal farther south—farther away from the heart of Pioneer Square—than it was for the Draft EIS Tunnel Alternative. The Tunnel Alternative would also preserve the 1 Yesler Building, which was slated for removal with the Tunnel Alternative evaluated in the Draft EIS. The Tunnel Alternative would also include the Steinbrueck Park Walkway, which would connect the Pike Place Market



2006 Appendix K

Chapter 5 of the 2006 Appendix K, Relocations Technical Memorandum, provides additional information on properties affected in the project area. Maps that summarize the full and partial acquisitions for each alternative can be found in Attachment A of Appendix K.

Historic District with the waterfront via a walkway over SR 99. This new connection would enhance access to historic resources in both areas.

In the central section, the Elevated Structure Alternative would continue to contrast with adjacent historic buildings and neighborhoods, though designers continue to look for ways to help make the elevated structure blend in more with its surroundings. Because the Elevated Structure Alternative would be wider than the existing viaduct, these effects would be increased in some places—particularly the area between approximately S. King Street and south of S. Main Street, where SR 99 would be 54 to 74 feet wider than the existing elevated structure.

In the north section, both the Tunnel and Elevated Structure Alternatives would substantially alter the Battery Street Tunnel by lowering the tunnel floor to increase vertical clearance to 16.5 feet. Additionally, both alternatives would require some modifications of the basement of Fire Station No. 2 to accommodate a new emergency exit from the Battery Street Tunnel.

What are the permanent effects to parking?

Both alternatives would remove more parking spaces than were estimated in the Draft EIS due to proposed improvements in the north section, project design changes, and updated parking counts. The number of available parking spaces counted in the project area is 3,703 spaces. The amount of available parking would be permanently reduced by about 1,723 spaces for the Tunnel Alternative and 882 spaces for the Elevated Structure Alternative, as shown in Exhibit 3-13.

Exhibit 3-13

Project Parking Effects

	On-Street ¹ Short-Term	On-Street ² Long-Term	Off-Street ³	Total Spaces
Existing Parking Spaces	1,020	626	2,057	3,703
Tunnel Alternative	-376	-430	-917	-1,723
Elevated Structure Alternative	-68	-276	-538	-882

¹ Short-term, time restricted (metered) parking spaces

² Free, long-term parking spaces

³ Pay parking and tenant-only parking

What are the permanent effects to fish, aquatic habitat, and water quality?

Between Pier 48 and Colman Dock, the seawall would extend slightly into Elliott Bay with either alternative. The Tunnel Alternative would fill about 0.23 acre and the Elevated Structure Alternative would fill about 0.14 acre of shallow underwater habitat, as shown in Exhibit 3-14. However, along the majority of the waterfront, the new seawall would be built behind the

existing seawall and could return some aquatic habitat area to Elliott Bay.

The project will be designed not to degrade existing water quality conditions within the project area. Once the project is built, stormwater runoff generated within the project area will be collected and either directed to the combined sewer system and sent to a treatment plant, or treated using best management practices (BMPs) consistent with applicable stormwater

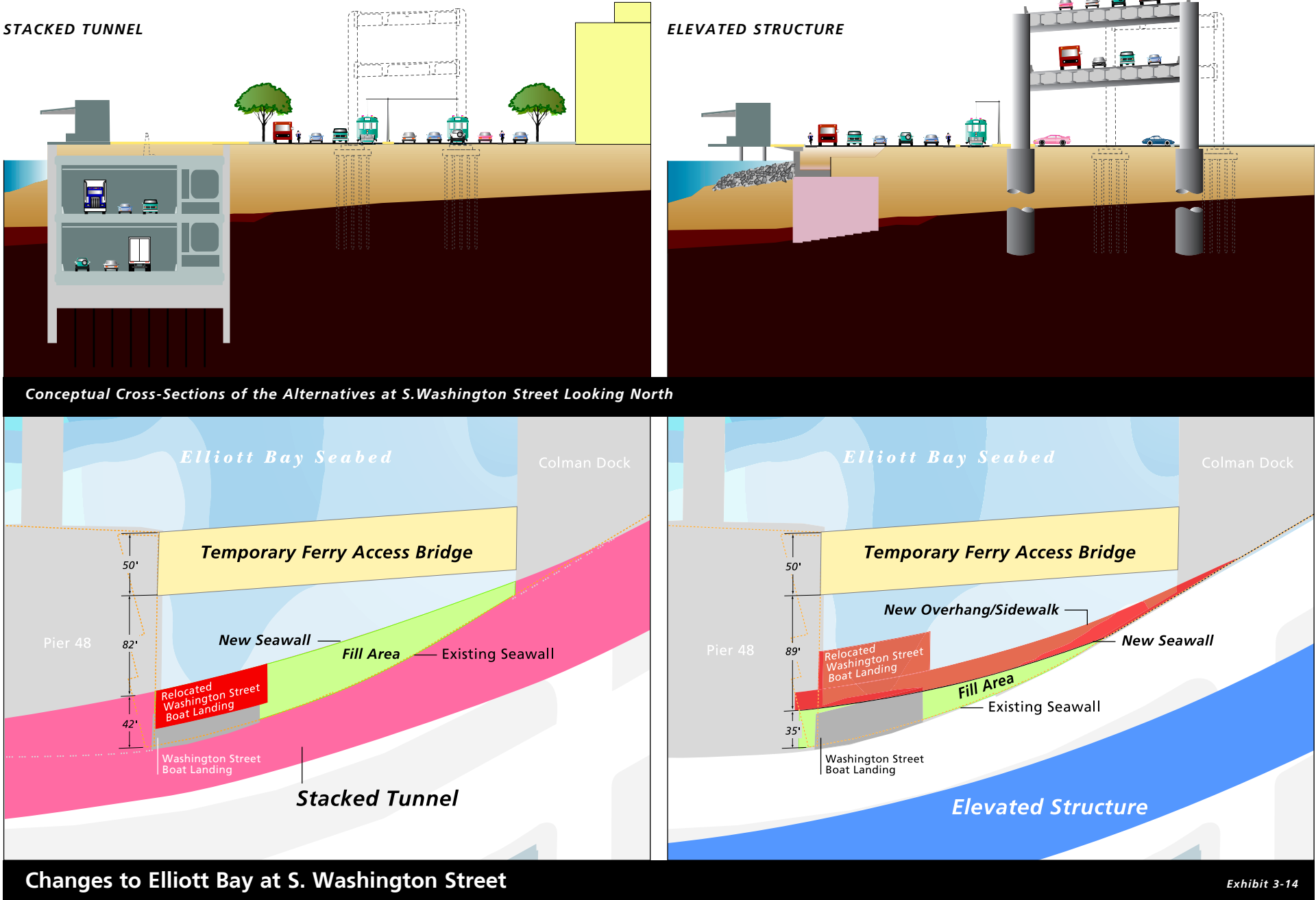


Exhibit 3-14

codes. The project would also provide some detention, which will help to moderate peak flows and reduce the likelihood of overflow events. Both of these changes would be an improvement over existing conditions since much of the stormwater runoff from the project area is not treated before it's discharged.

8 How could permanent effects be mitigated?

Once the project is built, it is expected to have few adverse effects on the surrounding area since the intent of the project is to replace the existing viaduct and seawall.

How could permanent effects to parking be mitigated?

The following mitigation measures could be used to offset reduced parking by the project:

- Increase utilization of other existing parking facilities in the area.
- Purchase property and build a new short-term parking structure.

How could permanent effects to fish and aquatic habitat be mitigated?

We will work with the regulatory agencies to improve any affected habitat in the project area. Similar to the possibilities described in the Draft EIS, efforts could also include removing in-water fill to restore habitat or adding textured face panels to the new seawall.

9 What construction plans are evaluated in the Supplemental Draft EIS?

The Supplemental Draft EIS evaluates three new construction plans that would fully close SR 99 for 0 to 42 months. Some plans include construction detours on First Avenue S. and Broad Street. The Tunnel and Elevated Structure Alternatives could be built under any of the three construction plans.

Shorter Construction Plan

The Tunnel Alternative would take an estimated 7 years to build if this plan were selected. With this plan, SR 99 traffic would be affected for 42 months

when both directions of SR 99 would be closed between S. Spokane Street and Denny Way.

The Elevated Structure Alternative would take an estimated 6.5 years to build if this plan were selected. With this plan, SR 99 traffic would be affected for 36 months when both directions of SR 99 would be closed between S. Spokane Street and Denny Way.

Intermediate Construction Plan

The Tunnel Alternative would take an estimated 8.75 years to build if this plan were selected. With this plan, SR 99 traffic would be affected by closures or restrictions for a total of 63 months. For 27 months, both directions of SR 99 would be closed between S. Spokane Street and Denny Way. For 36 months, portions of SR 99 would be closed or restricted with lane and ramp closures.

The Elevated Structure Alternative would take an estimated 7.75 years to build if this plan were selected. With this plan, SR 99 traffic would be affected by closures or restrictions for a total of 57 months. For 18 months, both directions of SR 99 would be closed between S. Spokane Street and Denny Way. For 39 months, portions of SR 99 would be closed or restricted with lane and ramp closures.

Longer Construction Plan

The Tunnel Alternative would take an estimated 9.5 years to build if this plan were selected. With this plan, SR 99 traffic would be affected by closures and restrictions for a total of 72 months. SR 99 would not be completely closed in both directions at any time during construction. Instead, southbound SR 99 would be closed for 30 months and northbound SR 99 would be closed for 33 months. SR 99 would have ramp closures for an additional 9 months.

For the Elevated Structure Alternative, the longer plan is similar to the plan evaluated in the Draft EIS. If this plan were selected, the Elevated Structure Alternative would take an estimated 10 years to build. With this plan, SR 99 traffic would be affected by closures or restrictions for 84 months. Both directions of SR 99 would be closed from S. Spokane Street to Den-

ny Way for 3 months. For the remaining 81 months, portions of SR 99 would be closed or restricted with lane and ramp closures.

10 How are the construction plans evaluated in the Supplemental Draft EIS?

The Tunnel and Elevated Structure Alternatives could be built under any of the three construction plans. However, for the Tunnel Alternative, only a side-by-side tunnel could be built under the longer plan. A stacked tunnel requires building transition sections at both ends of the tunnel where it converts from a stacked tunnel to a side-by-side tunnel. To build these transitions, the existing viaduct would need to be torn down and closed for at least 27 months.

This Supplemental Draft EIS doesn't evaluate in detail the three different ways each of the alternatives could be built. Instead, we've evaluated the effects of one alternative for each plan, as shown in Exhibit 3-15. The combinations were selected because the Tunnel Alternative is more complicated to build than the Elevated Structure Alternative and therefore benefits more from full or partial closure of SR 99. The effects on traffic and surrounding areas from closing SR 99 are similar for either the Tunnel or Elevated Structure Alternative.

Exhibit 3-15

Construction Plans Fully Evaluated in the Supplemental Draft EIS

	Tunnel Alternative	Elevated Structure Alternative
Shorter Construction Plan	Yes	No
Intermediate Construction Plan	Yes	No
Longer Construction Plan	No	Yes

Note: Both alternatives could be built under any of the construction plans

Exhibit 3-16 on the next page shows how construction activities could be sequenced for the alternatives.

Section 4(f) and Protection of Historic Resources

The AWW Project is adjacent to some of Seattle’s most historic buildings and neighborhoods. Section 4(f) is a provision of federal law pertaining to transportation projects that requires, among other things, that project proponents carefully consider protection of these resources in order to receive federal funding. Historic resources that might be affected by the project are the:

- Bemis Building
- Washington Street Boat Landing
- Battery Street Tunnel
- McGraw Kittenger Case (Blu Canary/MGM) Building

Additionally, the viaduct and seawall themselves are considered to be historic structures and are included in the Section 4(f) Evaluation.

A full discussion of Section 4(f) resources can be found at the end of the Supplemental Draft EIS on page 117. The Section 4(f) attachments (Parts A, B, C, and D) are provided in the 2006 Appendix N of the Supplemental Draft EIS.

What is a BMP?

A best management practice (BMP) is an action or structure that reduces or prevents pollution from entering the stormwater or treats stormwater to reduce possible degradation of water quality.

Where can I learn more about mitigation?

Chapter 5, Question 18 of the Supplemental Draft EIS describes how mitigation plans would be developed and measures that could mitigate permanent project effects.

Construction Activities Chart

Timeline Assumes Full Project Funding

